indeed she paints a vivid picture of the changes in European and American society and science by focusing on this particular disease.

From the wealth of details throughout the book, it is clear that Brumberg, a historian, has thoroughly researched her material. While the details add color to the lengthy case histories, they also tend to become repetitive and tedious, and in some cases the author continues to present examples after she has already convincingly illustrated her point. In spite of this, the book is interesting. Brumberg admirably does not attempt to attribute a modern etiology to the self-imposed starvation/anorexia that existed in previous centuries, since doctors of those periods never fully explored the causes of the disease and merely tried to treat its symptoms. She does not try to re-interpret the past to understand modern anorexia. Instead, she describes the religious, social, and cultural mores of the times and how these affected eating habits. Only when she analyzes eating disorders in the twentieth century does she allow herself a more interpretative tone, analyzing how current culture and expectations might lead to obsessional behavior centered around food. She does, however, show how, across the ages, the limitations on women's control over their lives has left them with limited modes of self-expression, and she implies that manipulation of eating habits has always been an acceptable and powerful mode of self-expression, especially for women.

The book should be of interest not only to health professionals, who will undoubtedly meet many patients with anorexia nervosa, but to the general public as well. Although it is not intended to be either a handbook giving advice on management of anorexia nervosa or a conclusive explanation of its causes, the book manages to present new perspectives of a very puzzling disease. By focusing on anorexia in the context of both its own history and of the history of medicine and society, Brumberg also presents new perspectives of the medicine and society of previous periods.

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REASONING IN MEDICINE. AN INTRODUCTION TO CLINICAL INFERENCE. By Daniel A. Albert, Ronald Munson, and Michael D. Resnik. Baltimore, MD, The Johns Hopkins University Press, 1988. 263 pp. $30.00.

During the period of transition from pre-clinical to clinical medical studies, I noted, with some irony, that my learning had been backward during the first two years. In microbiology, for example, I was introduced to a catalogue of organisms responsible for disease. My assignment was to study each organism's habits and the resulting clinical manifestations. In this way, I acquired a pattern of reasoning from the cause (the organism) to the effect (the signs and symptoms of disease). In the clinical setting, however, I found that the process of diagnosis involved a radically different intellectual challenge. Patients displayed clinical manifestations of disease. The diagnostic assignment was to recall which few of the multitude of disease entities may have borne responsibility for the observed clinical manifestations. This new thought pattern thus involved a cognitive about-face: in clinical diagnosis, the reasoning pattern began with effects and moved "retrograde" to potential causes.

Reasoning in Medicine begins with the premise that "the ways in which the good clinician acquires, evaluates, and employs information to reach conclusions about diagnoses and treatments seem almost inexplicable, but in fact the processes involve

intellectual methods that can be explicitly stated." The book is the product of a ten-year effort by a physician and two philosophers to illuminate the cognitive and logical underpinnings of diagnosis and decision making in modern clinical practice.

Unlike many highly theoretical undertakings, this book rarely strays far from the safety of everyday language and real-life circumstances. Chapter two contains a complete case report of a young woman's medical work-up for the chief complaints of fever, fatigue, and arthralgia. The tale is told in the voice of the omniscient narrator, and so reads like a novel, complete with dialogue. Subsequent chapters expose the reader to fundamental concepts in the diverse disciplines of clinical research design, inferential logic, and the philosophy of science. Chapter seven addresses some of the difficulties which have traditionally been encountered in the attempt to define the concept of "disease." Throughout these discussions, new vocabulary is introduced thoughtfully, and points are illustrated using examples from the initial case report, thereby making the material quite accessible to the medical reader.

The authors arrive at their model of clinical reasoning in the book's final chapters, integrating the preceding theoretical material with further clinical illustration. The section on incorrect stereotypes of the diagnostician is particularly interesting. The "diagnostician as detective" stereotype is said to break down, for example, because the incomplete explanatory power of current medical information dampens the effectiveness of purely deductive inference. The book concludes with a re-analysis of the initial case report framed against the background of the new theoretical model.

I found *Reasoning in Medicine* to be generally intriguing and would recommend it to the reader who seeks a concise presentation of topics such as decision analysis or inductive inference in contemporary medicine. I do not anticipate that this volume will serve to "ease the transition from preclinical to clinical training," as its authors hope, however. The authors freely admit that decision analysis is impractical as a clinical tool at this time. More pointedly, I recall that, as I entered that transition period, my awareness that a profound cognitive shift was taking place altered neither the nature nor the amount of effort required to cope with the process of differential diagnosis. Similarly, I suspect that the neophyte, as well as the experienced physician, will find that the abstract model of diagnostic reasoning presented in this book is not assimilable at the level of one's own clinical performance.

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ACADEMIC SCIENTISTS AND THE PHARMACEUTICAL INDUSTRY: COOPERATIVE RESEARCH IN TWENTIETH-CENTURY AMERICA. By John P. Swann. Baltimore, Johns Hopkins Press, 1988. 249 pp. $32.50.

In the current era of biotechnological revolution, corporate-funded scientific research and university-industry collaborations have become an accepted, nearly commonplace occurrence. The historical precedents for this modern-day relationship between the business world and academe, however, have been a scantily documented subject and provide a fascinating new area of exploration within the history of science and medicine. The present volume is a scholarly, ambitious attempt to begin to fill this void.

While rather dry in tone (not surprisingly; the book is drawn largely from the